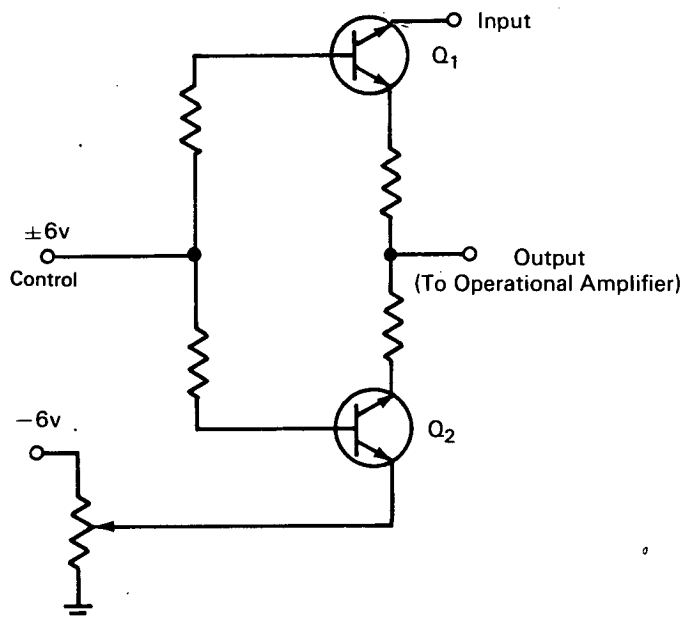


NASA TECH BRIEF



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Solid State Zero-Bias Bilateral Switch



This circuit was designed to switch a ± 2.5 volt peak, dc to 300 kHz input to an operational amplifier as controlled by a +6 (on) or -6v (off) signal.

The novel feature of this circuit is the use of the bilateral transistor Q_2 which draws a saturation current of equal amplitude and opposite polarity to the saturation current of the bilateral transistor Q_1 . As a result, the dc bias effect is canceled at the output (input summing point of the operational amplifier). Since Q_2 is switched on whenever Q_1 is on, and off when Q_1 is off, the operational amplifier has a true zero dc bias in both signal off and signal on conditions.

Notes:

1. This switch should be useful in a wide variety of signal switching and control circuits.

2. Inquiries concerning this switch may be directed to:

Technology Utilization Officer
Goddard Space Flight Center
Greenbelt, Maryland 20771
Reference: B67-10559

Patent status:

No patent action is contemplated by NASA.

Source: J. M. Husted
of Radio Corporation of America
under contract to
Goddard Space Flight Center
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